

# **Memorandum of Meeting**

## **DNREC – Air & Waste Management**

### **Air Quality Management Section**

**Meeting Date:** May 23, 2006

**Location:** DNREC Auditorium, Richardson and Robins Building, Dover, DE

**Purpose:** Workgroup Meeting #4, Delaware Electric Utilities Multi-Pollutant Regulation Development

The purpose of this workgroup is to establish a committee of interested parties to assist the Department in the development of the regulatory requirements and associated language to facilitate a reduction of sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), and mercury (Hg) from Delaware's coal and residual oil-fired electric generating units (EGUs). DNREC personnel, other state agencies, persons with environmental interests, persons impacted by power plant emissions, and power plant owners and operators were present at the meeting (please see attendance list following this memo).

This was the fourth in an anticipated series of five or more workgroup meetings. The specific purpose of this meeting was to allow interested parties that had not previously made presentations an opportunity to present to the workgroup their position and comments regarding the multi-pollutant regulation development. During previous meetings, representatives from the potentially affected electric power generating facilities and representatives of environmental interest groups have made presentations concerning their perspective of the multi-pollutant regulation.

The meeting was opened and conducted by DNREC's Ron Amirikian. Presentations were then made by representatives from environmental organizations.

#### **Delaware State Chamber of Commerce**

The first presentation was given by John Deming, representing the Delaware State Chamber of Commerce. Mr. Deming indicated that the Chamber was concerned with regulations that made Delaware power generators uncompetitive with other power generators in the region, and wanted to ensure that local cost competitive energy supplies are available. It was indicated that the Chamber supports the Federal CAIR and CAMR programs as well as any additional Federal regulation that did not lead to additional uncertainty or abandoned investment.

Responding to a question following the presentation, Mr. Deming emphasized that the Chamber's concern was there be "a level playing field" between Delaware's power generators and those in states in the region. Regulations that more severely impacted Delaware power generators than others in the region would make the Delaware units uncompetitive and would be detrimental to the state's economy.

The Delaware State Chamber of Commerce slide presentation may be viewed on the DNREC Electric Generating Unit (EGU) Multi-Pollutant Regulation website: <http://www.awm.delaware.gov/Info/Regs/AQMMultiPReg.htm>

#### **IBEW Local 1307**

The second presentation was given by Mike Dennis of the International Brotherhood of Electrical Workers (IBEW) Local 1307. Mr. Dennis indicated that IBEW Local 1307 represented the workers at the Indian River plant. Mr. Dennis spoke of his personal experience of working at the Indian River facility for many years and of the day-to-day efforts to operate and maintain the facility to remain in compliance with existing regulations. Mr. Dennis also spoke in general terms of an on-going attitude at Indian River to remain in compliance with existing environmental requirements and to plan for future requirements.

Mr. Dennis indicated that the IBEW did not oppose environmental regulation, but rather supports the development of regulations that attained the desired environmental improvements while allowing the facilities to continue to operate into the future. He indicated that phased-in regulatory requirements would be helpful to ensure that the facility remained economical

to continue in operation. Mr. Dennis expressed a concern that too restrictive a regulation, which required too rapid an implementation, could regulate the facility out of business.

Following Mr. Dennis' presentation, a number of comments were posed to Mr. Dennis regarding the Indian River facility. These comments included; that NRG's proposal for emissions reductions were insufficient, that the Indian River units are some of the dirtiest in the area, that information presented by NRG did not provide evidence that major electrical disruptions would occur or that the plant would be distressed by new environmental controls, and that Indian River was being given a competitive advantage if that facility was regulated less than others in the region. Mr. Dennis indicated that he was representing the IBEW local and its members and was not opposed to necessary environmental regulation, but requested that the regulation be applied fairly to ensure the facility is not shut down.

A copy of Mr. Dennis's written comments were presented to DNREC and may be viewed on the DNREC Electric Generating Unit (EGU) Multi-Pollutant Regulation website: <http://www.awm.delaware.gov/Info/Regs/AQMMultiPReg.htm>.

### **IBEW Local 1328**

The third presentation was given by Paul Simon of the International Brotherhood of Electrical Workers (IBEW) Local 1238. Mr. Simon indicated that IBEW Local 1238 represented workers at Conectiv's Edge Moor facility and the City of Dover's McKee Run facility. Mr. Simon indicated that there was concern with environmental regulations that went beyond federal program requirements. He indicated that there was support for improving the air quality, but that new regulations should be phased in so that there was not a devastating impact on Delaware's workers. Mr. Simon indicated that such a situation has occurred at the BLenland facility in New Jersey, where the cost of compliance with new regulations was so great that the facility will be shut down unless a buyer is found for the facility.

Mr. Simon discussed that regulations which force closure of a facility not only affect the workers at that facility, but also had a ripple effect throughout the local economy. Mr. Simon specifically mentioned:

- At the Edge Moor facility, approximately five to seven million dollars is spent annually in the local economy.
- Significant state, county, and city taxes would be lost.
- Increased potential for rolling brownouts or blackouts during peak times.
- Potential higher electric costs to the consumer.
- Reduced ability to attract and maintain industrial facilities for Delaware

Mr. Simon indicated that maintaining the viability of the coal-fired power plants in Delaware are important to the state's workers and the state's economy. He stated that phased-in environmental regulations that do not exceed the federal standards would help provide improved air quality minimize the negative impacts on the facilities and the state.

A copy of Mr. Simon's written comments were presented to DNREC and may be viewed on the DNREC Electric Generating Unit (EGU) Multi-Pollutant Regulation website: <http://www.awm.delaware.gov/Info/Regs/AQMMultiPReg.htm>.

### **Center for Energy & Economic Development**

The fourth presentation was given by Tom Hewson of Energy Ventures Analysis (EVA). Mr. Hewson indicated that he was making this presentation on behalf of the Center for Energy & Economic Development (CEED), an organization that represents coal producers, coal transporters, coal-based technology providers, and coal users. CEED had commissioned EVA to conduct an assessment of the emission reduction options for the Edge Moor and Indian River coal-fired units and the impact of potentially very restrictive emissions regulations on those units.

Mr. Hewson indicated that DNREC was considering strict emission limits on the coal-fired facilities, and that there were already federal programs in place to address the same facilities and the same pollutants (NOx, SO2, and mercury).

In discussing SO2 emissions, Mr. Hewson indicated that Delaware's coal-fired units emitted only a small portion of the State's total SO2 emissions inventory. He indicated that the SO2 emissions from the state's coal fired units had dropped significantly in the past several years, and that they over-complied with existing emissions caps. Under the federal Clean Air Interstate

Rule (CAIR), further SO<sub>2</sub> reductions would be required. The facilities could achieve the federally mandated reductions through fuel-switching (to lower sulfur fuels) and the installation of reduction technologies.

Mr. Hewson indicated that Delaware's utilities had already proposed to reduce SO<sub>2</sub> emissions by 60%. To go beyond that level of emissions reduction would require significantly higher capital expenditure and O&M annual costs. Because of the small size of Delaware's coal-fired units, the cost on a per-ton of reduction would be very high. Mr. Hewson indicated that no state multi-pollutant bill has required the more expensive reduction technologies on small units.

In discussion NO<sub>x</sub> emissions, Mr. Hewson indicated that Delaware's coal-fired units emitted only a small portion of the state's total NO<sub>x</sub> emissions inventory. He indicated that significant reductions in NO<sub>x</sub> emissions had taken place for Delaware's coal-fired units over the last decade, and that further reductions would be required under the federal CAIR program.

Mr. Hewson indicated that Delaware's utilities had already proposed to reduce NO<sub>x</sub> emissions by approximately 38%. To go beyond that level of emissions reduction would require significantly higher capital expenditure for the installation of selective catalytic reduction (SCR), which would also cause a large increase in O&M annual costs. Because of the small size of Delaware's coal-fired units, the cost on a per-ton of reduction for use of SCR would be very high. Mr. Hewson indicated that no state multi-pollutant bill has required the more expensive SCR NO<sub>x</sub> reduction technologies on small units.

In discussing mercury emissions, Mr. Hewson indicated that Delaware's power plants contributed approximately 25% on Delaware's 2004 mercury emissions inventory. He indicated that the federal Clean Air Mercury Rule (CAMR) would require significant coal-fired power plant mercury emissions reductions in a staged fashion. Mr. Hewson discussed some of the existing applicable mercury emissions reduction technologies, and the potential use of the technologies for Delaware's coal-fired units. He indicated that current mercury control technologies would be insufficient to meet the Phase II CAMR mercury emissions limits, and a combination of improved control technologies and trading would be required for Delaware units to attain compliance.

Mr. Hewson indicated that a very stringent multi-pollutant regulation would have significant impact by: making units that are already at a disadvantage (due to location, size and age) even less cost-competitive; contributing to reduced grid stability; increase power costs to consumers, and; increase the likelihood that some of the units may be retired. He indicated that should any of the units be retired, the impacts would include: even higher power costs due to reliance on higher cost fuels; lost employment at the power facilities and coal and transportation suppliers (Mr. Hewson indicated that it was estimated that Indian River and Edge Moor employed about 290 people, McKee Run employed about 30 people, and 300 coal mining and 50 to 100 railroad jobs were tied to Delaware's coal-fired plants); loss of tax income for the state and local governments, and; loss of Edge Moor's value as a co-generation source of steam to the neighboring DuPont facility and loss of the ability to burn landfill gas from the neighboring landfill. Mr. Hewson indicated that these negative impacts would occur and that there would be no net reduction in emissions to the environment due to the use of the federal cap and trade program.

Following Mr. Hewson's presentation, a number of issues were discussed. It was pointed out that some of the data in the presentation regarding Delaware's emissions inventory was outdated. Mr. Hewson indicated that it was the latest information that was available to the public. There was considerable discussion concerning the utilities' previous presentations and whether there were any more options for the facilities other than those made in those presentations. The relationship between SO<sub>2</sub> emissions and PM<sub>2.5</sub> was also significantly discussed, including how reduced SO<sub>2</sub> emissions limitations would negatively impact the PM<sub>2.5</sub> issues.

A copy of Mr. Hewson's slide presentation may be viewed on the DNREC Electric Generating Unit (EGU) Multi-Pollutant Regulation website: <http://www.awm.delaware.gov/Info/Regs/AQMMultiPReg.htm>.

### **Mr. Willet Kempton**

The fifth presentation was given by Mr. Willet Kempton. Mr. Kempton works at the University of Delaware and has many years experience in research on electric and gas utility programs and regulation. Mr. Kempton indicated that he attended the meeting to discuss that the threat of climate change has become more clear, and that the impact may be more severe than previously thought. He indicated that if changes are not made, during this century there would be significant melting of the major ice masses (with loss of land mass), change in the pH of ocean surfaces (with loss of ocean coral and resulting loss of oceanic and terrestrial species), and increased disease.

Mr. Kempton discussed the potential for the use of solar and wind technologies as power sources for Delaware. He indicated that solar technologies are not yet competitive with thermal generation. He indicated that Delaware has a good potential for off-shore wind generation, which he indicated can be competitive with thermal plants and has the ability to supply Delaware's power needs. Mr. Kempton indicated that the wind power facilities have the potential to reduce CO2 emissions into the atmosphere, eliminate concerns for future fuel-cost increases, and create more jobs on a per MWh produced basis than thermal plants. Mr. Kempton indicated that there were several potential wind unit sites that would minimize the impact of wind variation at any given single site.

Mr. Kempton recommended that any new thermal plants that are built be required to incorporate carbon sequestration.

Following Mr. Kempton's presentation, there was some discussion regarding the viability of wind power. There was some questioning over the relationship about the size vs. actual output of wind machines, and that wind turbine output was typically lower than the generator capacity rating. There was question over the capacity factors utilized in the assessment, and that the value assumed by Mr. Kempton was not supported by some references. Mr. Kempton indicated that any design for wind machines would require testing and evaluation of the conditions at the particular location, and that the conditions at that particular location would be utilized in the design of the units.

A copy of Mr. Kempton's written comments were presented to DNREC and may be viewed on the DNREC Electric Generating Unit (EGU) Multi-Pollutant Regulation website: <http://www.awm.delaware.gov/Info/Regs/AQMMultiPReg.htm>.

### **Delaware Economic Development Office**

The sixth presentation was given by Mr. Gary Smith of the Delaware Economic Development Office (DEDO). Mr. Smith indicated that DNREC has not assessed the impact of the proposed regulations. He indicated that included in the costs were the shutdown of the City of Dover's McKee Run generation station and the potential to have to build a billion dollar gasification plant to replace generation that is forced to retire. He indicated that the age and size of the potentially affected facilities make them vulnerable to becoming uncompetitive due to any new regulation.

Mr. Smith stated that ultimately the consumer would be required to pay for the impact of the new regulations, which would be over and above the significant cost increases about to be felt by the electric users in Delaware. Additionally, he indicated that the cost of power has become a significant concern to businesses considering moving into Delaware. He is aware of at least one organization that determined to move elsewhere with power costs a factor in their decision.

Mr. Smith also indicated that industrial generation plants may be also be vulnerable to retirement due to increased regulation; not from the regulation under discussion (since it does not apply to these units) but rather due to other regulation that he believes DNREC is developing.

Mr. Smith recommended that DNREC work with other state organizations to develop a solution to the problems rather than promulgate new regulations. He suggested working with DEDO, the Public Utility Commission (PUC), Delaware Municipal Electric Corporation, Delmarva Power, and the Delaware Electric Cooperative.

Following Mr. Smith's presentation there was discussion that Mr. Smith had not included any environmental groups in the list of organizations that DNREC should work with in finding solutions. Mr. Smith indicated that he thought DNREC and the PUC represented the public and those environmental organizations. Mr. Smith also indicated that it was important to maintain a level playing field with regard to regulations to ensure Delaware's utilities are not put at a disadvantage.

A copy of Mr. Smith's written comments were presented to DNREC and may be viewed on the DNREC Electric Generating Unit (EGU) Multi-Pollutant Regulation website: <http://www.awm.delaware.gov/Info/Regs/AQMMultiPReg.htm>.

Following these presentations, Ron Amirikian closed the meeting thanking everyone for their participation. He also indicated that during the next meeting DNREC would outline its plans for moving forward with developing the multi-pollutant regulation.

That next meeting was tentatively scheduled for May 31, 2006, but Ron would notify everyone of the date, time and location of the meeting.

### May 23, 2006 Meeting Attendance (Sign-In) List

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